

REMARKS

The Amendment, which is filed in response to the Office Action "Action"), mailed February 17, 2009, is believed to fully address all and every issue raised in the Action. Favorable reconsideration of the application is respectfully requested.

Claims Disposition and Amendment

Claims 1-9 were pending and claims 1-5 were considered. Claims 6-8 are withdrawn from consideration as being directed to non-elected invention.

Upon entry of the amendment, which is respectfully requested, claims 1-3 and 5-8 will be pending in the application. In the current Amendment, claim 1 is amended to incorporate the feature of claim 4, and claim 4 is canceled accordingly. As the amended claim 1 is the same as original claim 4, it is believed that no new search is necessary and its entry is respectfully requested.

Applicant thanks the Examiner for withdrawing the objections of claim 2-3.

Response to the Rejections under 35 U.S.C. § 102

In the Action, Claims 1-3 are rejected under 35 U.S.C. 102(b) as assertedly being anticipated by Laird et al. (Laird, Edwin C., Samir B. Hanna. "Analysis of 4.5 mol/L sulfuric acid for organic compounds leached from battery separators." National Bureau of Standards Special Publication 519. Trace Organic Analysis: A New Frontier in Analytical Chemistry. Proceedings of the 9th Materials Research Symposium. 797-802. April 10-13, 1978, held at NBS, Gaithersburg, MD Issued April, 1979.)

Claims 1-3 are also rejected under 35 U.S.C. 102(b) as assertedly anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fujita (US 5,677,075 A).

Without acquiescing the rejection or the Office's discussion, solely in order to advance the prosecution, Applicant amends claim 1 to incorporate the features of claim 4, rendering the rejection moot.

Therefore, withdrawal of the rejection is respectfully requested.

Response to Rejection under 35 U.S.C. § 103

The Office rejects claims 4-5 under 35 U.S.C. 103(a) as assertedly being unpatentable over Fujita, as applied to Claims 1-3, and further in view of O'Rell et al. (US 4,216,281).

The Office asserts that Fujita teaches a lead-acid battery which comprises a positive electrode, a negative electrode, a separator, and an electrolyte (col. 16, lines 22-51), wherein said electrolyte contains a volatile organic acid, such as carboxylic acid (col. 3, lines 33-35). The Office states "Fujita does not specifically teach the content of the volatile organic acid is equal to **250 mg or higher** per liter of said electrolyte," but asserts that the lead-acid battery of Fujita would inherently meet the limitation, because the electrolyte solution starts as a water with a pH of 7 (col. 10, line 23) and through the presence of carboxylic acid (HCOOH) (col. 3, lines 33-35) drops down to a pH of 2-3 (col. 11, lines 1-3), and Fujita further teaches the amount of carbon powder that is used to create the carboxylic acid is 3.1 wt% of the solution (col. 10, lines 33-34) and the amount of solution added to the lead acid battery may be as low as 1-3 vol% of the lead acid battery electrolyte (col. 12, lines 4-8). Office Action, the full paragraph bridging pages 3-4.

So, it is noted that the Office reads claim 1 as requiring "the content of the volatile organic acid is equal to 250 mg or higher per liter of said electrolyte." However, claim 1 as amended on November 5, 2008 and entered (Applicant showed the amended claim is supported by the disclosure of the specification and priority document; and it is noted that the Office entered the amendment) recites "the content of the volatile organic acid is equal

to 250 mg or lower per liter of said electrolyte.” Therefore, Applicant respectfully submits that the rejection based on erroneous reading of claim 1 is flawed and cannot be sustained. As the Office correctly explains, the content of the acid (formic acid) taught by Fujita is much greater than 250 mg, and, thus, fails teach the limitation of claim 1 and O’Rell does not cure the deficiency.

Therefore, Applicant respectfully request the rejection be withdrawn.

In addition to the above argument, Applicant provides the following additional arguments with respect to the combined teachings of Fujita and O’Rell.

The Office admits that Fujita fails to teach said separator contains a surfactant or is composed of polyethylene.

O’Rell is relied upon to cure the admitted deficiency of Fujita, as teaching a lead acid battery separator (claim 1), wherein said separator is composed of polyethylene due to its high branching or fibrillation (col. 3, lines 22-36) and contains a surfactant to reduce the electrical resistance of the separator (col. 4, lines 48-60). The Office concludes, therefore, that it would have been obvious to one having ordinary skill in the art at the time the invention was made to create the lead acid battery of Fujita, wherein the separator is composed of polyethylene and has a surfactant because O’Rell et al. teach the polyethylene has high branching or fibrillation properties and the surfactant will reduce the electrical resistance of the separator.

However, as discussed above, the combined teaching of Fujita and O’Rell fails to teach all and every element of claim 1. Neither do they suggest to modify the combined teachings to reach the claimed subject matter with a reasonable expectation of success.

As described in the disclosure of the application, there are two methods available for containing a volatile organic acid in electrolyte, one of which is to employ a separator containing

a surfactant for the lead-acid battery. However, containing a surfactant in a separator does not automatically ensure that the concentration of the volatile organic acid contained in the electrolyte of a lead-acid battery becomes 250 mg/L or lower, and the present application discloses a method of controlling the concentration of volatile organic acid contained in the electrolyte of the lead-acid battery can become 250 mg/L or lower. Page 3, line 16 - page 6, line 20 of the specification. None of the references teach or suggest the above features.

Accordingly, it is believed that the rejection under 35 U.S.C. § 103 is not sustainable and withdrawal is respectfully requested.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number **202-775-7588**.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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